

1 Docket No. NVO-19.16

2

3 METHODS AND SYSTEMS FOR ESTIMATING RETICLE BIAS STATES

4

5 ABSTRACT

6 **[0085]** Disclosed are methods and systems for estimating a reticle bias state for a process
7 system, that include computing a difference between control data provided to the process system
8 and error data based on a process system output(s), and estimating the reticle bias state based on
9 weighted measures associated with the control data, the weighted measures being based on the
10 number of data points included in the difference. The methods and systems include associating
11 the reticle bias state estimate with a first quality factor, computing at least one weighted measure
12 based on a number of data elements associated with the reticle, using the weighted measure(s) to
13 provide a computed reticle bias state estimate and an associated computed quality factor, and,
14 comparing the computed quality factor with the first quality factor to determine whether to
15 update the reticle bias state estimate with the computed reticle bias state estimate.